



# DMO-ADA

Distributed Mission Operations–Air Defense Artillery



## Summary

- Support training on actual systems and/or virtual & constructive simulations over a secure ARCNet Backbone
- DMO-ADA are low cost, high fidelity ADA systems: Stinger, Avenger & Norwegian Advanced Surface to Air Missile Fire Distribution Center (NASAMS FDC) provides representation from National Command Authority (NCA) to individual gunners.
- Validated in NORAD's AMALGAM ARROWS '06 & '07 and AMERICA'S SHIELD 07 exercises
- Well-suited for experimentation, training, operational rehearsal, Tactics Techniques & Procedure (TTP) development and system concept definition
- Current activities will extend network and add nodes at JADOC and selected Army Reserve National Guard (ARNG) & Army Active Duty ADA sites

## DMO-ADA...Sustaining Warfighter Readiness Now!

DMO-ADA supports Homeland Defense (HLD) and other Joint Interagency and Multinational (JIM) training requirements with a combination of real-world sensor, weapon and command and control (C2) systems integrated with simulation systems over the Air Reserve Component Network (ARC-Net) distributed nationwide network.

DMO-ADA was developed and integrated by Space and Missile Defense Future Warfare Center (SMDFWC) to interoperate with North American Aerospace Defense Command (NORAD) DMO and other JIM systems to represent homeland air defense with emphasis on the Joint Air Defense Operations Center (JADOC), battle management and integrated sensors & weapons.

## Distributed Mission Operations–Air Defense Artillery

### DMO-ADA Mission & Goals

- Design, build and execute a distributed virtual training support system for the complex Homeland Air and Cruise Missile Defense Mission. Successfully demonstrated during the following events:
  - NORAD Amalgam Arrow 06-07 (April 2006)
  - NORAD Amalgam Arrow 07-06 (March 2007)
  - Army ADA Training Exercise America’s Shield (August 2007)
  - The first Army evaluation of DMO-ADA during Homeland Defense C2 Mission Rehearsal Exercise (C2MRX) (November 2007)
- Provide a distributed live, virtual and constructive environment to support training and to assess doctrine and Tactics, Techniques and Procedures (TTP) for National Capitol Region-Integrate Air Defense System (NCR-IADS), Deployable-Homeland Air and Cruise Missile Defense (D-HACMD) and OCONUS operations for current and near-term missions
- Provide testbed support for current and future integrated and joint air and missile defense evaluations of operations, TTP, CONOPS and risk reduction assessments

### DMO-ADA Activities

- Amalgam Arrow 06-07 – “Fantastic Success”
  - Distributed exercise – CONUS exercise of live, virtual, constructive simulations
  - JADOC & weapon crews at 164th ADA Brigade, Florida ARNG
- Amalgam Arrow 07-06 – “Low Cost Training”
  - Exciting success with two JADOCs, East & West coasts (263d Army Air and Missile Defense Command (AAMDC) & 164th ADA Brigade)
  - Enhanced capabilities & opportunities
- Exercise America’s Shield 07 – “Wildly Successful”
  - Support to 263d AAMDC, South Carolina ARNG, during deployed activities
  - Supported JADOC training for D-HACMD
- Evaluated and successfully certified the 164th ADA Brigade at the FY 08 C2MRX using DMO-ADA infrastructure.
  - Multiple tactical and simulation locations integrated into one scenario environment
  - Supported replacement JADOC crew evaluation
- Other DMO-ADA support (ongoing)
  - Support integrated DMO-ADA training into JADOC
  - Support integrated ARNG future C2MRX and training

- Support other ARNG ADA on-call training
- Joint Air Defense Operations – Homeland Joint Test and Evaluation (JT&E)
- Support to United States Northern Command (NORTHCOM), Missile Defense Agency (MDA)/Joint Theater Air and Missile Defense Office (JTAMDO) and other service & joint activities

### Future Enhancements and Applications

- Extend network and add nodes to operational and home station sites
- Maintain SMDFWC capabilities as DMO-ADA hub and support system integrator; bring on U.S. Army Air Defense Center as principal ADA lead to support DMO and joint training & experiments
- Work with NORAD & USAF exercises to gain composite battalion experience in Jointly Integrated Model (JIM) environment
- Leverage DMO-ADA to serve as a D-HACMD and Battle Management Command and Control (BMC3) testbed for Army and Joint activities
- Coordinate with other DoD agencies to support mutual activities (USJFCOM, AFNORTH, MDA, etc)
- Expand functionality to serve as civil-military interoperability testbed

### Advantages of DMO-ADA

- Home base training
- Each operator position represented by either actual BMC3 workstation, weapon trainer, or simulator (for both friendly and threat systems)
- Live sensors or models feed BMC3 systems for realistic situational awareness
- All tactical voice and data circuits are represented
- Simulation provides “truth” driver for training scenario presentation
- System incorporates data recording for post-mission analyses; exercises are repeatable



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